## ABSTRACT

The invention relates to a method for automatic generation of an envelope for a design model that is available on computer and is decomposed into finite elements with nodes by means of a prescribed meshing. A cuboid is determined in which the mesh is fully contained. This cuboid is decomposed into volume elements. The decomposition is a complete one such that each point of the cuboid, and thus each point of the design model, falls into a volume element. A check is made for each volume element of this cuboid as to whether the volume element overlaps with at least one determined finite element. An overlap is already present when the finite element and the volume element have a single point in common. The set of the overlapping volume elements forms a geometric body. The latter is bounded from the outside by the outer bounding surfaces of the outlying volume elements. These bounding surfaces are determined. The envelope being sought is assembled from the set of the bounding surfaces determined in such a way. The method operates quickly and with prescribed accuracy.

(Figure 4)